

WHAT IS CLAIMED IS:

1. A hands-free faucet, comprising:
  - a sensor;
  - a pilot valve assembly that dispenses fluids when an activation signal is received from the sensor;
  - an override control coupled to the pilot valve assembly, the override control being configured to allow fluid to flow continuously beyond a predetermined period of time; and
  - an electronic detent coupled to the override control, the electronic detent configured to lock and unlock a pilot within the pilot valve assembly.
2. The hands-free faucet of claim 1, wherein the sensor comprises a proximity faucet.
3. The hands-free faucet of claim 1, wherein the pilot valve assembly comprises a DC motor coupled to a cam.
4. The hands-free faucet of claim 3, wherein the pilot valve assembly comprises a gear train that couples a shaft of the motor to the cam.
5. The hands-free faucet of claim 4, wherein the gear train comprises a spur gear having a stem coupled to an outer surface that limits the travel of the pilot.
6. The hands-free faucet of claim 5, wherein the limits of travel of the pilot are established in part by side surfaces of a strike plate.
7. The hands-free faucet of claim 1, further comprising a mixing valve coupled to the pilot valve assembly.
8. The hands-free faucet of claim 1, further comprising a diaphragm coupled to the pilot and in contact with a volume of fluid on a portion of an inlet and an outlet surface.

9. A proximity faucet, comprising:
- a sensor;
  - a pilot valve assembly that dispenses fluids when an activation signal is received from the sensor;
  - an override control coupled to the pilot valve assembly, the override control being configured to allow a continuous flow of fluids through the sensor beyond a predetermined time period programmed within the sensor; and
  - an electronic detent coupled to the override control, the electronic detent being configured to unlock and allow movement of a diaphragm positioned below the pilot valve assembly when the activation signal is received from the sensor.
10. The proximity faucet of claim 9, wherein the pilot valve assembly further comprises a Direct Current motor.
11. The proximity faucet of claim 10, wherein the pilot valve assembly comprises a gear train.
12. The proximity faucet of claim 10, wherein the override control comprises a mode that allows continuous fluid flow and a mode that allows for a predetermined period of flow.
13. The proximity faucet of claim 10, wherein the pilot valve assembly is comprised of a motor coupled to a shaft, coupled to a cam, coupled to a cam follower, coupled to a gear train.
14. The proximity faucet of claim 13, wherein the cam follower has a P-shaped cross-section and wherein the cam is disposed within an orifice passing through the cam follower.
15. The proximity faucet of claim 10, further comprising a mixing valve that dispenses fluids to a preset or an adjustable temperature.
16. The proximity faucet of claim 10, wherein the fluid comprises water and the diaphragm is coupled to a pilot.

17. The proximity faucet of claim 16, wherein the pilot valve assembly comprises a spur gear having a stem coupled to an outer surface that limits the travel of the pilot.

18. A method of controlling a continuous flow of water through a proximity faucet, comprising:

selecting a mode that allows water to flow continuously through a proximity sensor;

locking a valve assembly to allow the water to flow beyond a period of time programmed within the proximity sensor; and

providing an automatic and a mechanical system to discontinue the continuous flow of water beyond the programmed time.

19. The method of claim 18, wherein the automatic system comprises a sensor for detecting a user in a field of view.

20. The method of claim 18, wherein the mechanical system comprises a selector that is manually rotated from an open to an automatic or a closed mode.